

IN THE CLAIMS:

1. (Twice amended) A pharmaceutical composition comprising a peptide that inhibits binding of free light chain of immunoglobulin (LC) to mast cells:

wherein when the peptide is in the presence of an equimolar quantity of the free light chain of immunoglobulin in a solution, the free light chain of immunoglobulin's binding to said mast cells is reduced by at least 5%.

2. (Twice amended) The pharmaceutical composition of claim 1, wherein the peptide also:

binds to the free light chain of immunoglobulin;

competes with a second peptide for binding to the free light chain of immunoglobulin;

wherein said second peptide has the amino acid sequence AHWSGHCCL (SEQ ID NO:1); and

wherein when said peptide and said second peptide are present in equimolar amounts in a solution, said peptide reduces binding of said second peptide to said free light chain of immunoglobulin by at least 5%.

3. (Thrice amended) The pharmaceutical composition of claim 2, wherein the peptide reduces the binding of said second peptide to the free light chain of immunoglobulin by at least 10%.

4. (Twice amended) The pharmaceutical composition of claim 2, wherein the peptide is a peptidomimeticum.

5. (Twice amended) The pharmaceutical composition of claim 2, wherein the peptide is a pharmaceutically acceptable compound.

10. (Thrice amended) A pharmaceutical composition for treating a disease state in a subject, said disease state characterized by exhibiting:

- i) a serum concentration of free light chain of immunoglobulin in serum of at least 8 mg/l;
- ii) a spinal fluid concentration of free light kappa-chain of immunoglobulin of at least 70  $\mu\text{g/l}$ ; and/or
- iii) a spinal fluid concentration of free lambda-chain of immunoglobulin of at least 300  $\mu\text{g/l}$ ;

C3 said pharmaceutical composition comprising a peptide, wherein when the peptide is in the presence of an equimolar quantity of free light chain of immunoglobulin (LC), the peptide reduces the equimolar quantity of LC's binding to mast cells present in solution therewith by at least 5%.

11. (Thrice amended) The pharmaceutical composition of claim 10, wherein the peptide inhibits LC's binding to mast cells present in solution by at least 10%.

12. (Thrice amended) The pharmaceutical composition of claim 10, wherein the disease is selected from the group consisting of asthma, allergy, chronic inflammatory bowel disorders, viral infection and multiple sclerosis.

13. (Thrice amended) A pharmaceutical composition comprising:  
a peptide that, in the presence of an equimolar quantity of free light chain of immunoglobulin (LC), reduces the equimolar quantity of LC's binding to mast cells present in the solution by at least 5%; and  
a pharmaceutically acceptable carrier or diluent.

C4 16. (Twice amended) The pharmaceutical composition of claim 2, wherein the peptide reduces the binding of said second peptide to the free light chain of immunoglobulin by at least 25%.

17. (Twice amended) The pharmaceutical composition of claim 2, wherein the peptide reduces the binding of said second peptide to the free light chain of immunoglobulin by at least 50%.

18. (Twice amended) The pharmaceutical composition of claim 2, wherein the peptide reduces the binding of said second peptide to the free light chain of immunoglobulin by at least 75%.

19. (Twice amended) The pharmaceutical composition of claim 2, wherein the peptide reduces the binding of said second peptide to the free light chain of immunoglobulin by at least 90%.

20. (Twice amended) The pharmaceutical composition of claim 4, wherein the peptide has a mass of less than 10 kDal.

21. (Twice amended) The pharmaceutical composition of claim 5, wherein the peptide has a mass of less than 2 kDal.

22. (Twice amended) A pharmaceutical composition comprising a peptide produced by a process, said process comprising:

screening a series of peptides for each of said peptide's capability to bind an immunoglobulin's free light chain (LC), said screening comprising:

a) incubating a peptide from said series of peptides with an admixture comprising LC and a labeled peptide, said labeled peptide comprising a peptide and a label, and said peptide capable of:

- i) binding the free light chain of immunoglobulin; and
- ii) competing with a second peptide with the amino acid sequence AHWSGHCCL (SEQ ID NO: 1) for binding with the free light chain of immunoglobulin; and

isolating the peptides which bind LC and compete with the second peptide.

23. (Twice amended) The pharmaceutical composition of claim 22, characterized in that the peptide has a mass less than 10 kDal.

C \*  
24. (Twice amended) The pharmaceutical composition of claim 23, wherein the peptide is an LC-binding peptide fragment of Tamm-Horsfall glycoprotein or a derivative thereof.

25. (Twice amended) The pharmaceutical composition of claim 22, characterized in that the peptide has a mass of less than 2 kDal.

---

31. (Amended) The pharmaceutical composition of claim 13, wherein the peptide:  
binds LC;  
competes for binding with LC and a second peptide with the amino acid sequence AHWSGHCCL (SEQ ID NO: 1); and  
reduces binding of said second peptide with LC by at least 5% when the peptide and the second peptide are present in a solution with said LC in equimolar amounts.

32. (Amended) The pharmaceutical composition of claim 13, wherein the peptide has a mass of less than 10 kDal.